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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/357,726	07/21/1999	DAVID L. WOOD	1004-3633	9654

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EXAMINER
MOORTHY, ARAVIND K

ART UNIT	PAPER NUMBER
2131	7

DATE MAILED: 04/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/357,726	Applicant(s) WOOD ET AL.	
	Examiner Aravind K Moorthy	Art Unit 2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 March 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☒ Claim(s) *26 and 29* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 July 1999* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *3, 5, 6* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract exceeds the 150-word limit.

Drawings

2. The drawings are objected to as stated in form PTO-948.

Claim Objections

3. Claims 26 and 29 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 24 claims an information resource, by only claiming an information resource in claim 26 it does not further limit the independent claim. Claim 27 claims a security barrier, by only claiming a security barrier in claim 29 it does not further limit the independent claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1, 2, 6, 10, 13, 15, 16 and 24-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shwed et al U.S. Patent No. 5,835,726 in view of Chen et al U.S. Patent No. 5,602,918.

As to claims 1, 24 and 27-29, Shwed discloses validating a request message against a predefined request message specification. Shwed discloses transmitting the validated request message. Shwed discloses validating a response message against a predefined response message specification. Shwed discloses that the response message corresponds to the validated request. Shwed discloses transmitting the validated response [column 6, lines 3-38].

Shwed does not teach a security barrier.

Chen teaches a system and method for establishing secured communications pathways across an open unsecured network, without compromising the security of any parties to the communication that involves establishing secured gateways or firewalls between the Internet and any party which desires protection, see abstract.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have the firewall replace router **108**. After the packet filter in gateway **122** validated the request message against the predefined specification then it would have passed

the request across the firewall. The response message would have been validated by the packet filter in gateway **106** and passed across the firewall.

The motivation to modify Shwed by the teaching of Chen is because firewalls provide a safe passage between the secured network and the party on the public network [column 2 lines 15-21].

As to claim 2, Shwed teaches wherein the request and response message specifications are predefined in accordance with valid request and response message constraints specific to an information resource **212** [Shwed column 6, lines 28-38].

As to claim 6, Shwed teaches accessing an information resource in accordance with the validated request message and preparing the response message in accordance with the access [column 7 lines 7-11].

As to claim 10, Shwed teaches the request and the response message validating are respectively performed at first **122** and second **106** secure data brokers on opposing sides of the security barrier; and wherein the validated request and response message transmissions are between the first and second secure data brokers [Shwed column 6, lines 3-38].

As to claim 13, Shwed teaches at least one of the validated request message transmitting and the validated response message transmitting is via a secure protocol [column 12 lines 66 to column 13 line 5].

As to claim 15, Shwed as modified by Chen teaches the security barrier includes a firewall [Chen figure 1].

As to claim 16, Chen teaches that the security barrier includes a secure communication channel between servers [column 2, lines 4-14].

As to claim 25, Shwed teaches a second data broker [i.e. gateway **106**] on the second side of the security barrier, wherein, in response to an access targeting the information resource, the second data broker validates a response message against a predefined response message specification and forwards only validated response messages across the security barrier [column 6, lines 3-38].

As to claim 26, Shwed teaches an information resource [column 7, lines 7-11].

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shwed et al U.S. Patent No. 5,835,726 and Chen et al U.S. Patent No. 5,602,918 as applied to claim 1 above, and further in view of Applied Cryptography (hereinafter Schneier).

As to claim 3, Birrell does not teach that at least one of the request and response message specifications is cryptographically secured.

Schneier teaches the use and benefits of encryption, page 2.

It would have been obvious to a person having ordinary skill in the art at the time invention was made to have had packet filter instructions cryptographically secured.

It would have been obvious to modify Birrell by the teaching of Schneier because cryptography offers authentication, integrity and nonrepudiation, page 2.

6. Claims 4, 5, 7-9, 14 and 17-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shwed et al U.S. Patent No. 5,835,726 and Chen et al U.S. Patent No. 5,602,918 as applied to claim 1 above, and further in view of Bobo, II U.S. Patent No. 5,870,549.

As to claims 4, 5, 7-9, 14, 17, 20 and 22, the Shwed-Chen combination teaches receiving, at an application proxy **122**, an access request targeting an information resource, as discussed

above. The Shwed-Chen combination teaches transmitting the request message to a secure data broker for the request message validating [column 7, lines 61-65].

The Shwed-Chen combination does not teach formatting the request message in a structured language corresponding to the request message specification.

Bobo teaches the translation of messages into XML format [column 21, lines 37-42].

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have gateway **122** as taught by Shwed to format the outgoing packets to the XML structured language.

It would have been obvious to have modified the Shwed-Chen combination by the teaching of Bobo because XML is easier to write applications for, easier to understand, and more suited to delivery and inter-operability over the Web [column 21 lines 33-37].

As to claim 18, the Shwed-Chen combination teaches accessing the information resource in accordance with the validated access request [Shwed column 7 lines 7-10]

As to claim 19, the Shwed-Chen combination teaches receiving, at an application proxy [i.e. gateway], an access request targeting the information resource and performing the access request formatting at the application proxy [i.e. gateway] [column 6, lines 3-38].

As to claims 21 and 23, the Shwed-Chen combination teaches accessing the information resource in accordance with the validated access request from a client and supplying the client with a response in accordance with the validated response [column 9 lines 17-50].

7. Claims 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shwed et al U.S. Patent No. 5,835,726 and Chen et al U.S. Patent No. 5,602,918 as applied to claim 1 above, and further in view of Ottensooser U.S. Patent No. 5,905,856.

As to claims 11 and 12, the Shwed-Chen combination teaches rejecting packets if it is not defined by the rules [Shwed column 8, lines 28-33]. The Shwed-Chen teaches forwarding a response message without transmission of the request message across the security barrier [Shwed column 9, lines 24-27].

The Shwed-Chen combination does not teach parsing the request message using Data Type Definitions (DTDs) encoding a hierarchy of valid tag-value pairs in accordance with syntax of a valid request message.

Ottensooser teaches parsing the request message using Data Type Definitions (DTDs) encoding a hierarchy of valid tag-value pairs in accordance with syntax of a valid request message [column 7, lines 58-64; column 10 line 66 to column 11 line 30].

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified the Shwed-Chen combination so that gateway of Shwed would have parsed the request message using data type definitions, encoding a hierarch of valid-tag pairs in accordance with the syntax of a valid request message. If the request message were not successfully parsed, an alert message would have been forwarded across the firewall.

The motivation to have modified the Shwed-Chen combination is that the structure permits the use of a simple language that allows the user to write a set of tests that closely match the business activities under scrutiny. The language is sufficiently high level so that the user does not have to be involved in the highly technical "behind the scenes" type work that actually tells the computer application what to do. Other products on the market are not as advanced and rely on the skills of computer programmers to write test plans rather than business users [column 13, lines 47-58].

8. Claims 30, 31-33 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al U.S. Patent No. 5,710,889 in view of Chen et al U.S. Patent No. 5,602,918.

As to claims 30 and 32, Clark discloses data broker code and parser code executable on a first network server. Clark discloses an information source [repository **11**]. Clark discloses that the data broker code includes instructions executable as a first instance thereof to receive access requests in a structured language corresponding to a predefined request message specification and to forward validated ones of the access requests toward the information resource. Clark discloses the parser code includes instructions executable as a first instance thereof to validate the received access request against the predefined request message specifications [column 5 line 63 to column 6 line 29; column 10 lines 53-61].

Clark does not teach a security barrier separating the first network server and the information resource.

Chen teaches a system and method for establishing secured communications pathways across an open unsecured network, without compromising the security of any parties to the communication that involves establishing secured gateways or firewalls between the Internet and any party which desires protection, see abstract.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have a firewall between the first network server and the information source. Only the validated access requests would cross the firewall toward the information resource.

The motivation to modify Clark by the teaching of Chen is because a firewall provides a safe passage between the secured network and the party on the public network [column 2 lines 15-21].

As to claim 31, Clark discloses an encoding of the predefined request message specification [column 7 lines 53-63].

As to claim 33, Clark discloses an encoding of the predefined response message specification [column 8 lines 31-35].

As to claim 35, Clark discloses the computer program code is transmitted in at least one computer readable medium from an electronic storage medium and on a network [column 5 lines 30-48].

9. Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Clark et al U.S. Patent No. 5,710,889 and Chen et al U.S. Patent No. 5,602,918 as applied to claim30 above, and further in view of Bobo, II U.S. Patent No. 5,870,549.

The Clark-Chen combination does not teach that the application proxy code includes instructions executable to format the access requests in accordance with the structured language corresponding to the predefined request message specification.

Bobo teaches instructions executable to format the access requests in accordance with the structured language corresponding to the predefined request message specification.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have the application proxy code have instructions to format the access requests in accordance with the structured language corresponding to the predefined request message specification [column 21, lines 37-42].

It would have been obvious to have modified the Clark-Chen combination by the teaching of Bobo because XML is easier to write applications for, easier to understand, and more suited to delivery and inter-operability over the Web [column 21 lines 33-37].

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aravind K Moorthy whose telephone number is 703-305-1373. The examiner can normally be reached on Monday-Friday, 8:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gail O Hayes can be reached on 703-305-9711. The fax phone numbers for the organization where this application or proceeding is assigned are 703-746-7239 for regular communications and 703-746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-1373.

April 16, 2003

GAIL HAYES
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100